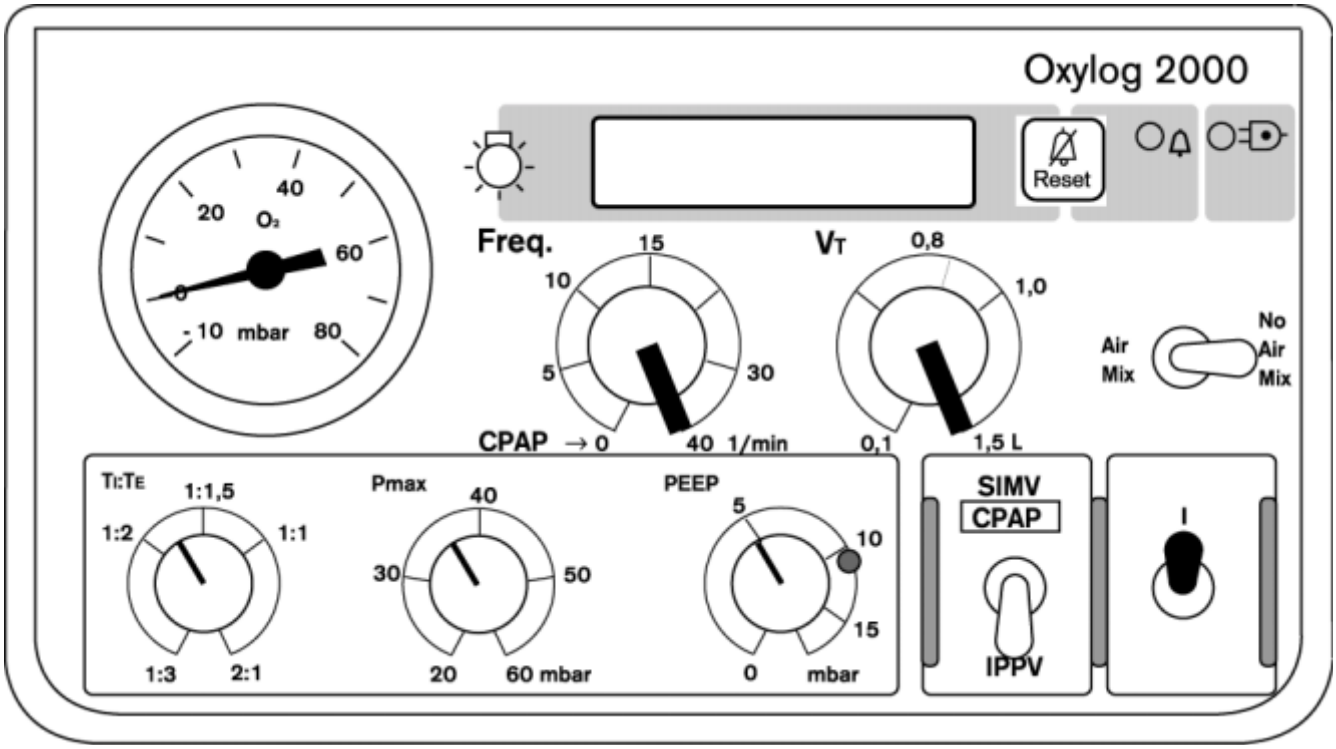
Oxylog 2000

Notes on field of application: Tests marked with the "check" symbol are listed in the Inspection Report. The test results are to be documented in the Inspection Report.



1 General

☑ **1.1** **Support plate 8412232** [_____OK]

Check parts according to PMS 5554.N.
[Check condition]

☑ **1.2** **Pipeline connecting hoses** [_____OK]

Various others.
[Check condition, check for leaks]

☑ **1.3** **Vehicle device mount** [_____OK]

[Check condition, function]

☑ **1.4** **DC/DC-converter with connecting cable 8412071** [_____OK]

[Check condition, function]

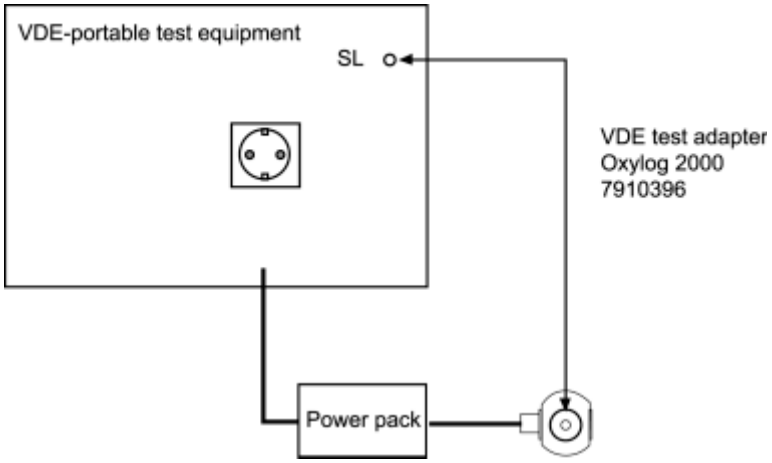
1.5 **Power pack 8412074, 12 V DC**

[Check condition, function]

1.5.1 **Equivalent device leakage current test for 12 V DC power pack**

The subsequent measurements may exceed the initial value by max. 50 %, but, at the same time, must be less than/equal to 500 µA.

NOTE:
Always enter the initial measured value in a new test-value entry sheet.



☑ **1.5.1.1** **Initial measured value** [_____µA]

☑ **1.5.1.2** **VDE tester reading** [_____µA]

☑ **1.6** **Carrying strap 8412073** [_____OK]

[Check condition]

☑ **1.7** **Ventilation hose with measuring lines 8412068** [_____OK]

[Check condition, check for leaks]

☑ **1.8** **Ventilation valve 8412001** **[_____OK]**

Diaphragm 8410653
[Check condition]

Proper seating
Non-return valve 8412002
[Check condition]

Proper seating
Flow sensor 8412034
[Check condition]

Angle connector 8412235
[Check condition]

2 Oxylog 2000, General

[Check condition]

☑ **2.1** *** Battery pack** [_____]

Open battery compartment.
Battery pack 8411599 (1000 mAh, green) replace every 2 years)

Battery holder 1835505
[Check condition]

Connecting cable 8412072
[Check condition]

Batteries (alkali-manganese)

Fuse (1AF)
[Check condition]

2.2 Gas supply

Detach connection port.

☑ **2.2.1** *** Filter (filter element)** [_____]

Order no.: D 2316
Maintenance interval in months: 24

2.3 Pressure regulator

* Downstream pressure test is performed only after replacement of parts or after repair procedures.

Test value:
Pdy = 2.4 to 2.6 bar at flow of 40 L/min.
[Check condition, check for leaks]

☑ **2.3.1** *** Spare parts set for Knocks pressure regulator** [_____]

Order no. 8406678
Maintenance interval in months: 72

☑ **2.3.2** *** Spare parts set for Lorch pressure regulator** [_____]

Order no.: 8411142
Maintenance interval in months: 72

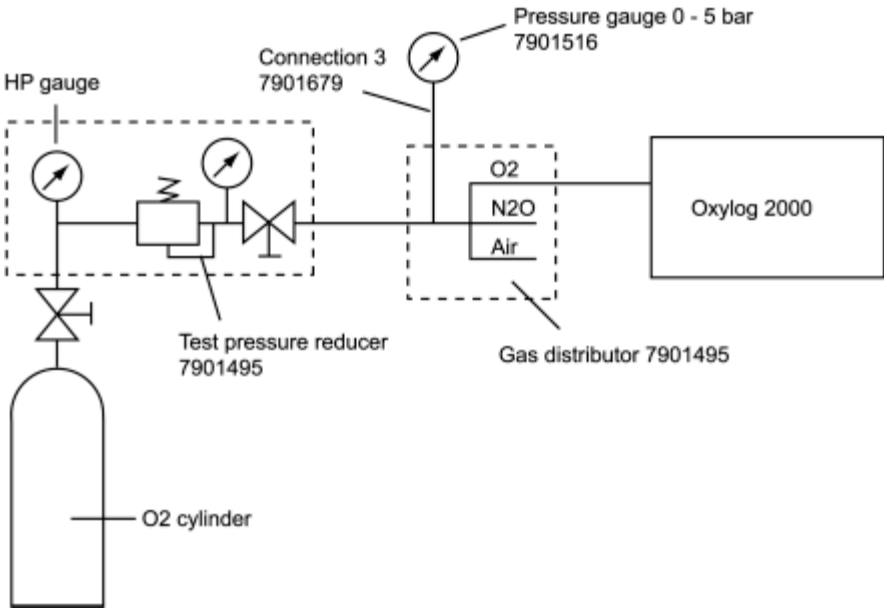
☑ **2.4** **Leak test (inlet end)** **[_____OK]**

NO AIR MIX, main switch "0".
Set test pressure regulator to 5 bar.
Make sure there is no test set-up leakage and connect up unit.

Close valve V1.

Pressure drop on pressure gauge P1 must not exceed 0.5 bar in 30 seconds. Testing is to be performed in switch settings "IPPV" and "SIMV/CPAP".

[OK]



3 Function checks in DS mode

Assemble the unit.
Enter DS mode, see annex.
The following tests and/or measurements are carried out in the DS mode.

☑ 3.1 Software version [_____txt]

☑ 3.2 Self-test [_____OK]

Test value:
During the power-on test the horn must sound twice.
[Check function]

☑ 3.3 LC display and alarms [_____OK]

SW 1.XX:
Start and activate DS test 5.
For SW 2.XX and higher:
Start and activate DS test 4.

Test values:
LC display, all pixels are activated
[Check function]

LC display background illumination
[Check function]

Horn LED and voltage LED are lit
[Check function]

Horn on
[Check function]

SW 1.XX:
Terminate test 5.
For SW 2.XX and higher:
Terminate test 4.

☑ 3.4 Reading potentiometer settings [_____OK]

SW 1.XX:
Start and activate DS test 6.
For SW 2.XX and higher:
Start and activate DS test 5.

Test values

Potentiometer setting		Value displayed by Oxylog 2000 (tolerances)
Frequency:	5 1/min	5.00 to 5.15 1/min
	10 1/min	9.88 to 10.07 1/min
	40 1/min	39.5 to 40.05 1/min
VT	0.1 L	0.095 to 0.15 L
	0.8 L	0.79 to 0.81 L
	1.5 L	1.45 to 1.55 L
TI:TE	1:3	1:2.9 to 1:3.0
	1:1.5	1:1.4 to 1:1.6
	2:1	1.9:1 to 2.0:1
Pmax:	20 mbar	20.0 to 20.5 mbar
	40 mbar	39.6 to 40.4 mbar
	60 mbar	59.4 to 60.0 mbar

☑ **3.5** **Pressure sensor P supply switching point** **[_____OK]**

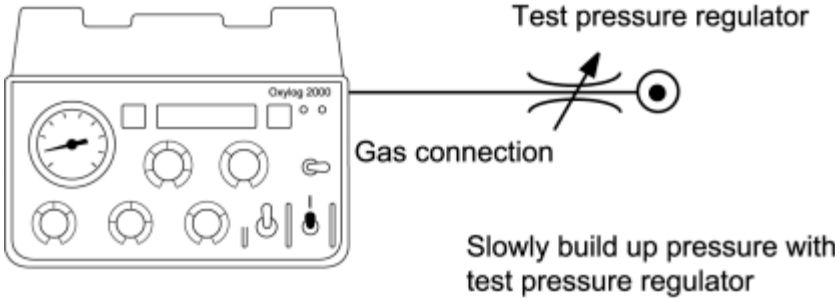
SW 1.XX:
Start and activate DS test 8.
For SW 2.XX and higher:
Start and activate DS test 2.
Test set-up: see illustration

Test values:
Display: Pressure low
[Check function]

Switching point = 2 ±0.2 bar
[Check function]

Display: Pressure high
[Check function]

SW 1.XX:
Terminate test 8.
For SW 2.XX and higher:
Terminate test 2.



☑ **3.6** **Pressure sensors P-Air Mix and P-LA with 3/2-way valves** [_____OK]

SW 1.XX:
Start and activate DS test 9.
For SW 2.XX and higher:
Start and activate DS test 3.
Test set-up: see illustration

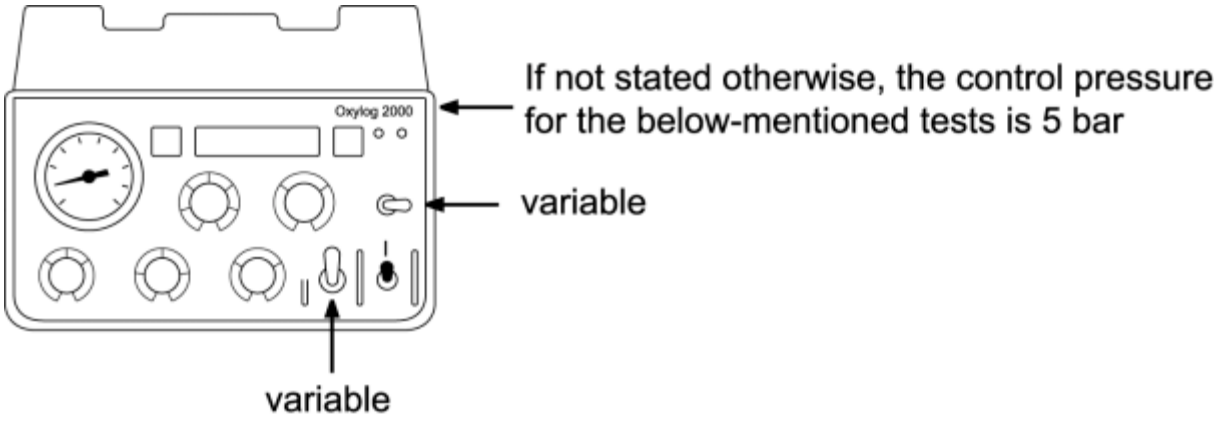
Test values:
Switch position IPPV
Display: IPPV
[Check function]

Switch position SIMV/CPAP
Display: SIMV/CPAP
[Check function]

Switch position Air Mi
xDisplay: Air Mi
x[Check function]

Switch position No Air Mi
xDisplay: No Air Mi
x[Check function]

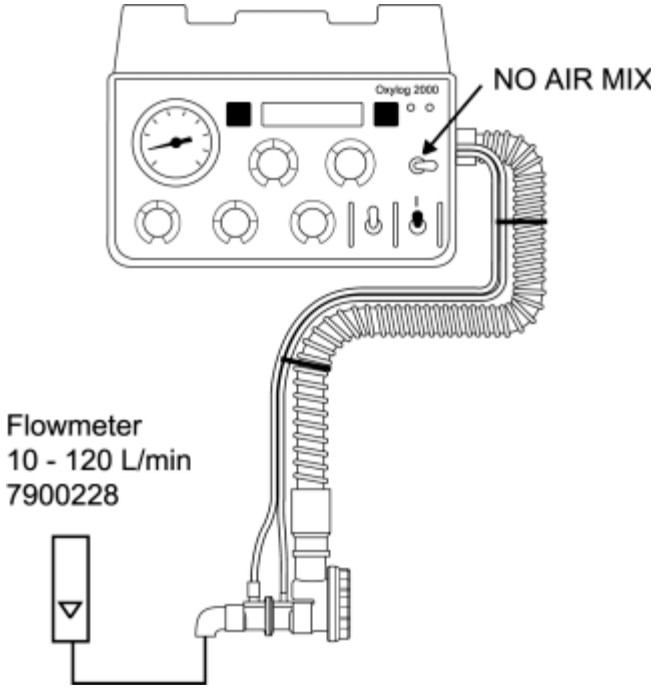
SW 1.xx:
Terminate test 9.
SW 2.00 and higher:
Terminate test 3.



☑ **3.7** **Delta-P pressure sensor (flow measurement)** **[_____OK]**

SW 1.XX:
Start and activate DS test 11.
For SW 2.XX and higher:
Start and activate DS test 14.
Set flow by way of background illumination button (-) or reset button (+) and use external flowmeter to measure flow rate of 50 L/min.
Test set-up: see illustration

Test value:
Display on unit (act.) 50 ±5 L/min
[Check function]



☑ **3.8** **MV valve** **[_____OK]**

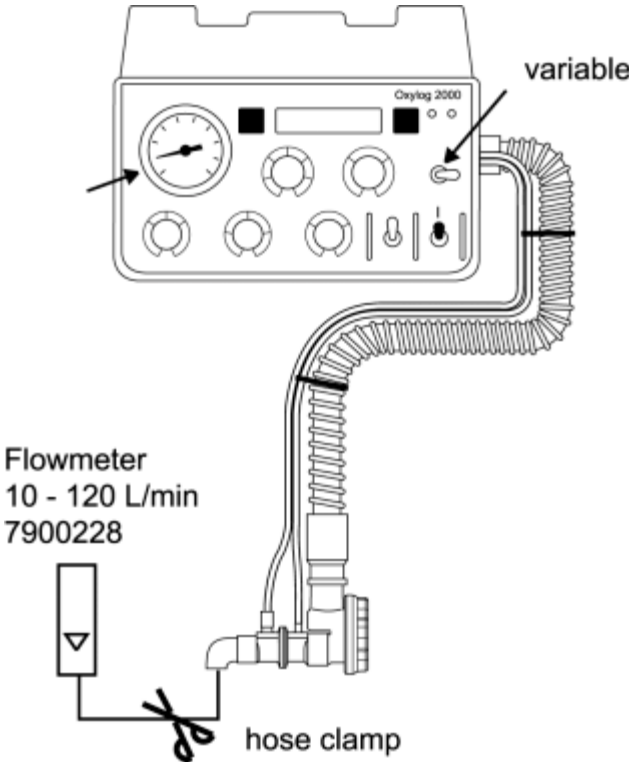
Set flow by way of background illumination button (-) or reset button (+) and take reading from display.

3.8.1 Air Mix

Generate backpressure of 10 mbar at 10 L/min (20 mbar backpressure for SW 3.XX and higher).

A backpressure of 20 mbar is used for all other test values.

Read on the pressure gauge.



3.8.1.1 Setting (nom.) 10 L/min.

Flowmeter value 9 – 11 L/min
[Check function]

3.8.1.2 Setting (nom.) 40 L/min.

Flowmeter value 36.8 - 43.2 L/min
[Check function]

3.8.1.3 Setting (nom.) 60 L/min.

Flowmeter value 55.2 - 64.8 L/min
[Check function]

3.8.2 No Air Mix SW 1.XX, SW 2.XX

Test set-up:
As above, but without backpressure.
Test values:

3.8.2.1 Setting (nom.) 15 L/min.

Flowmeter value 13.5 - 16.5 L/min
[Check function]

3.8.2.2 Setting (nom.) 60 L/min.

Flowmeter value 55.2 - 64.8 L/min
[Check function]

SW 1.XX:
Terminate test 11.
For SW 2.XX and higher:
Terminate test 14.

3.8.3 No Air Mix SW 3.XX

Test set-up:
As above, but without backpressure.
Test values:

3.8.3.1 Setting (nom.) 10 L/min.

Flowmeter value 9 - 11 L/min
[Check function]

3.8.3.2 Setting (nom.) 30 L/min.

Flowmeter value 27.6 - 32.4 L/min
[Check function]

3.8.3.3 Setting (nom.) 60 L/min.

Flowmeter value 55.2 - 64.8 L/min
[Check function]

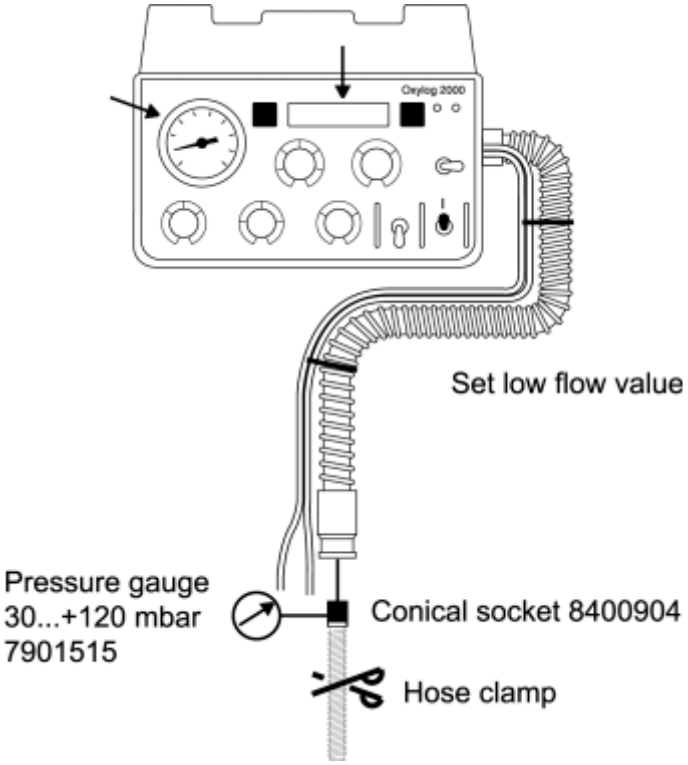
Terminate test 14.

☑ **3.9** **Paw sensor and pressure gauge** **[_____OK]**

SW 1.XX:
Start and activate DS test 12.
For SW 2.XX and higher:
Start and activate DS test 18.
Test set-up: see illustration

Build up a pressure of 40 mbar using hose clamp.
Test values:
The reading on the pressure gauge and LCD may deviate from the test pressure gauge reading by ±2 mbar.
[Check function]

SW 1.XX:
Terminate test 12.
For SW 2.XX and higher:
Terminate test 18.

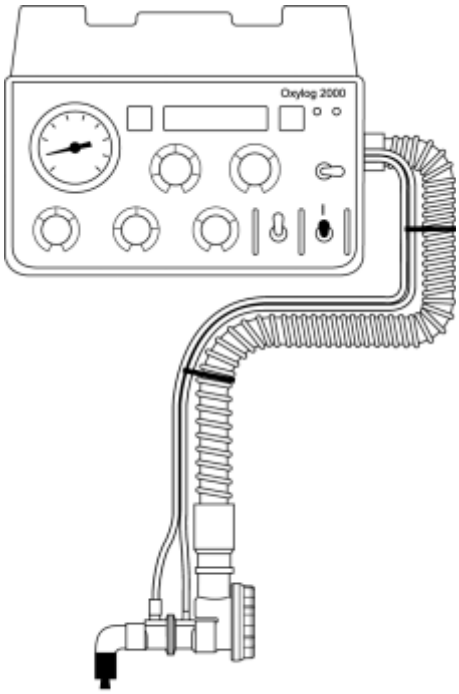


3.10 Safety valve

SW 1.XX:
Start and activate DS test 11.

For SW 2.XX and higher:
Start and activate DS test 14.
Test set-up: see illustration

Allow a flow of 50 L/min (20 L/min for SW 3.XX and higher).



Seal with cork

☑ **3.10.1 Opening pressure up to SW 3.XX** **[_____mbar]**

Opening pressure = 70 ±10 mbar

SW 1.XX:
Terminate test 11.
For SW 2.XX and higher:
Terminate test 14.

☑ **3.10.2 Opening pressure as of SW 3.XX** **[_____mbar]**

Opening pressure = 70 ±5 mbar

SW 1.XX:
Terminate test 11.
For SW 2.XX and higher:
Terminate test 14.

☑ **3.11 Autozero function** **[_____OK]**

3.11.1 SW 1.xx

Start and activate DS test 13.

Test set-up:
As above, but remove cork.
Device settings:
PEEP = 0, IPPV

A flow of 20 L/min is generated.

Press the "Info" button.

Test value:
When autozero valve is switched on
flow less than equal to 1 L/min.
[Check function]

Terminate test 13.

Exit the DS mode.

3.11.2 For SW 2.XX and higher

Start and activate DS test 16.

Test set-up: unchanged

Test value:
When using the info and reset buttons the switching ON and OFF operation of the autozero valve must be audible.

Terminate test 16.

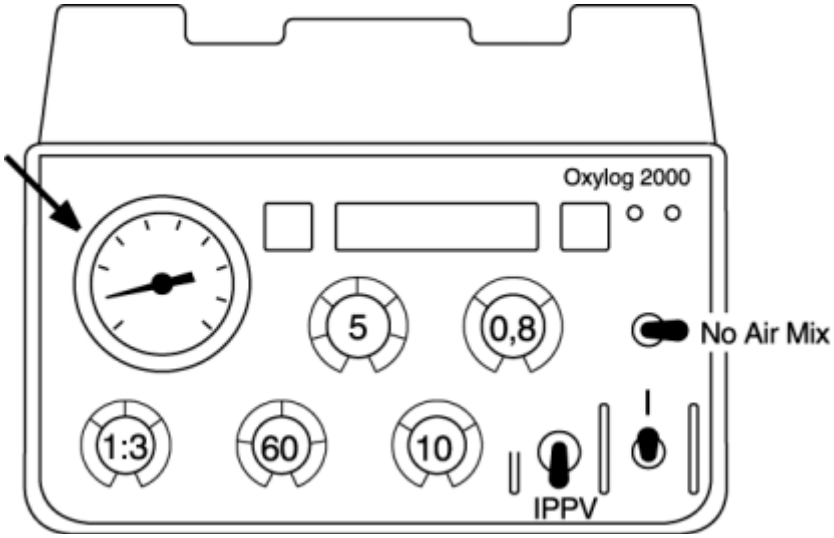
Exit the DS mode.

4 Function checks without DS mode

☑ **4.1** **Leak test** **[_____OK]**

Test set-up:
Connect test bag to patient connector.
Settings:

Test value: see illustration
Connect test bag to patient connector.
Pointer should not move during expiration.
[Check function]



4.2 **PEEP setting**

Test set-up and settings as above.
Test values:

☑ **4.2.1** **PEEP 0** **[_____mbar]**

0 +2 mbar

☑ **4.2.2** **PEEP 5** **[_____OK]**

5 +/- 2 mbar

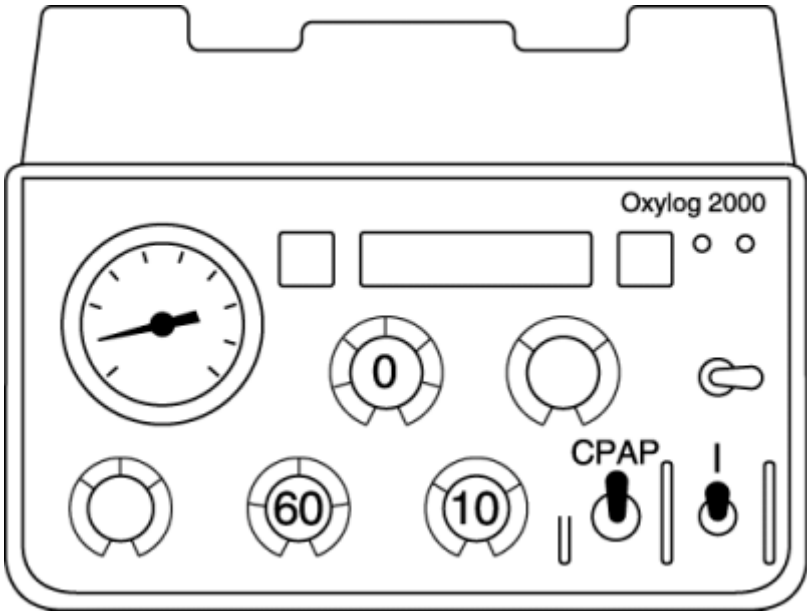
☑ **4.2.3** **PEEP 15** **[_____OK]**

15 +2 mbar/-3.5 mbar

☑ **4.3** **CPAP function** **[_____OK]**

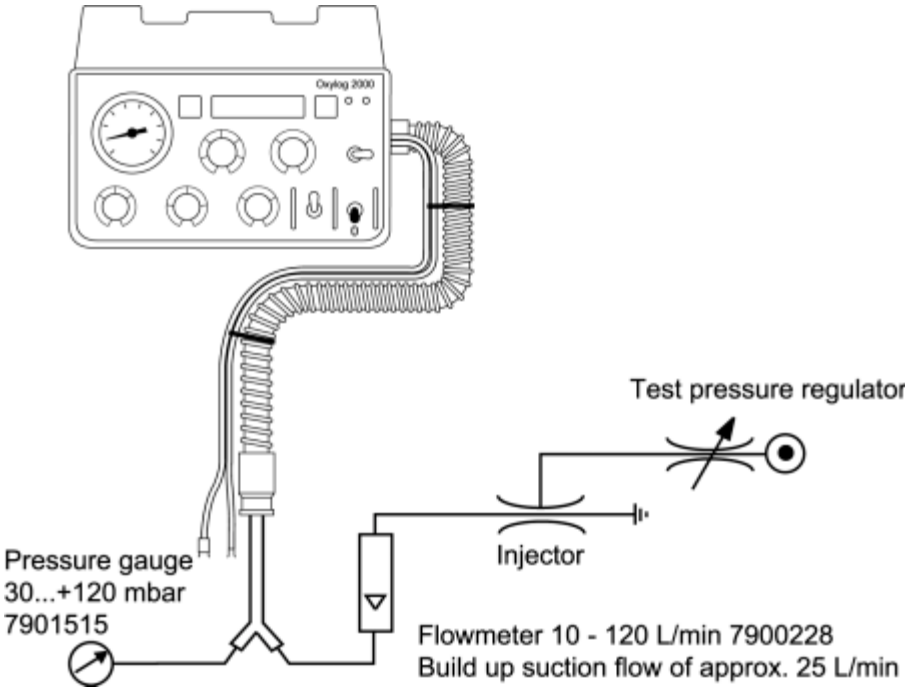
Test set-up unchanged.
Settings: see illustration

Test value:
Squeeze test lung.
Test lung must automatically inflate to set CPAP pressure within 8 seconds.
[Check function]



4.4 **Emergency air valve**

Test set-up:
Switch unit off and disconnect gas supply.



☑ **4.4.1** **Opening pressure** **[_____mbar]**

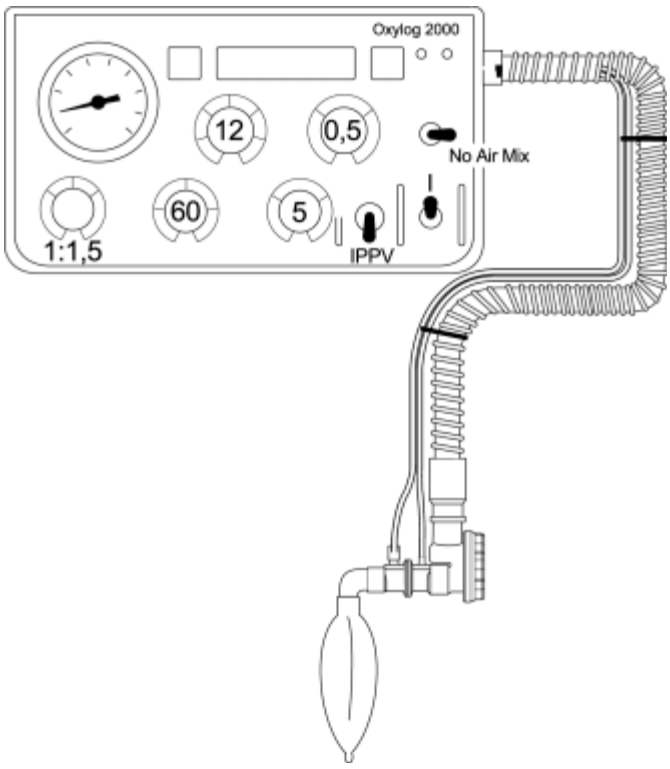
0 to -12 mbar

☑ **4.5** **Final test** **[_____OK]**

Re-establish gas supply and switch on unit.
Settings: see illustration

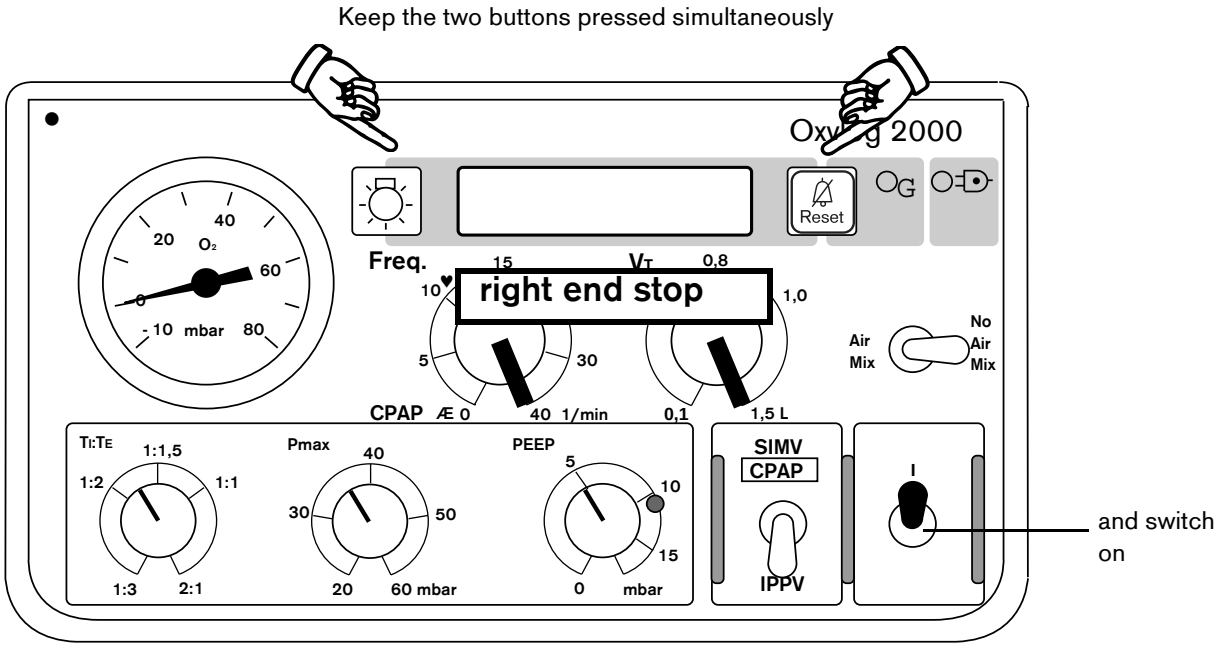
Test values:
MV = 6 ±1 L/min
[Check function]

No alarms.
[Check function]



5 Place fully functional unit at the user's/owner's disposal.

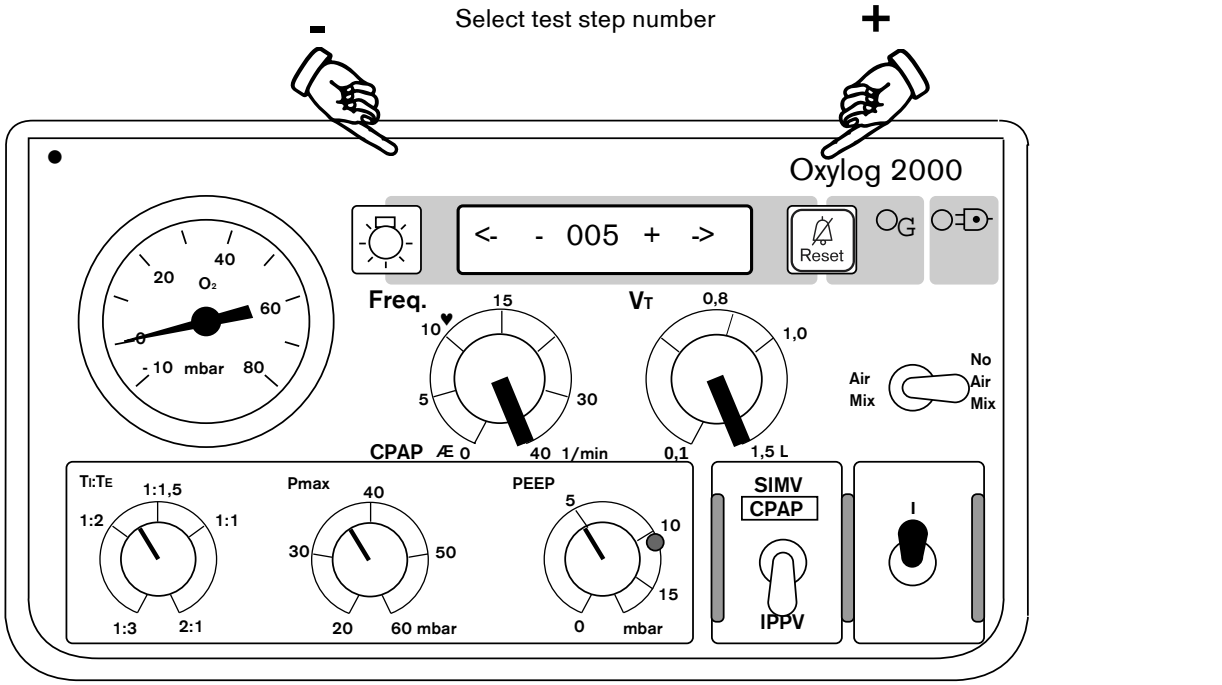
Entering the Service Mode SW 1.XX



S	e	l	b	s	t	t	e	s	t					
S	W		V	e	r	s	i	o	n		0	1	.	x	x

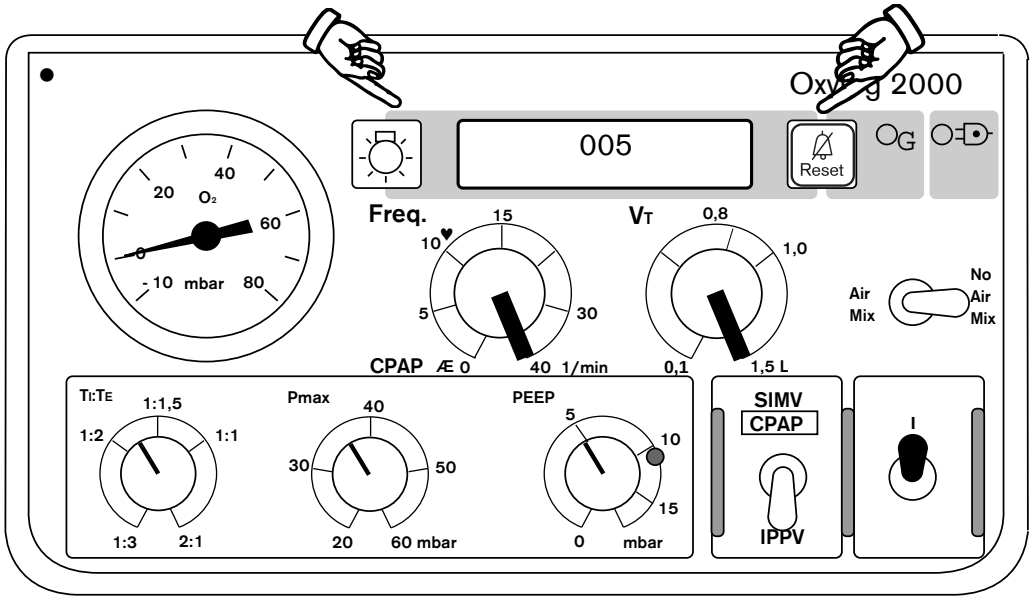
D	S	-	M	o	d	e		w	i	t	h	o	u	t	
C	a	l	i	b	r	a	t	i	o	n					

S	e	l	e	c	t		D	S	-	M	o	d	e		
	<-	-			0	0	1			+		->			



Activate test (ENTER)

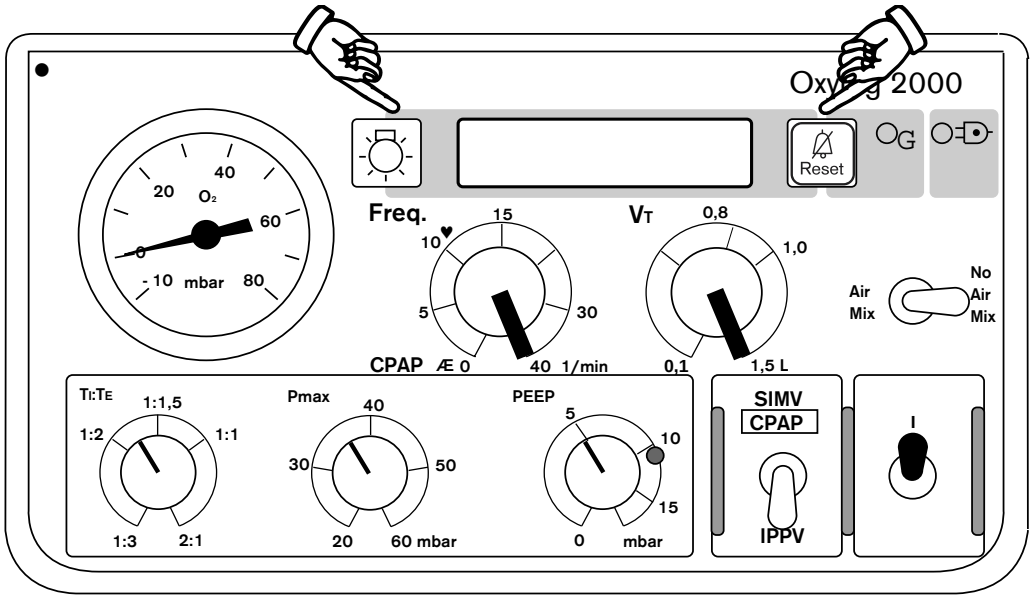
Press buttons simultaneously



Carry out test

Terminate test (ENTER), back to select DS test

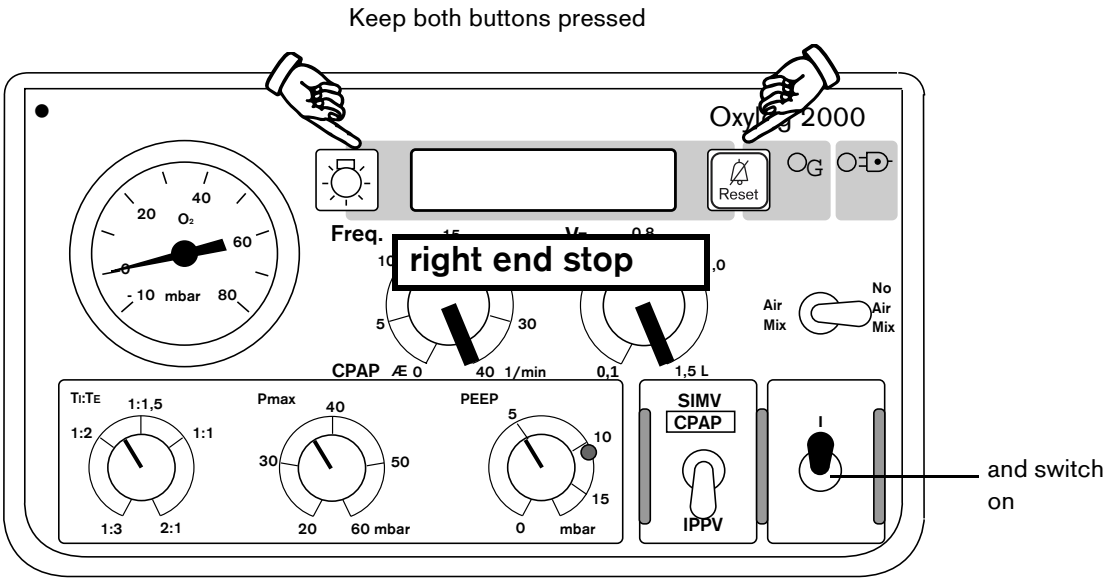
Press buttons simultaneously once more



Exiting the Service Mode SW 1.XX

Switch off machine
When the machine is switched on again, the self test is carried out and ventilation is started at the set values

Entering the Extended Dräger-Service-Mode (ESM) for SW version 2.XX and higher



Displayed messages

Self-test SW version n.XX

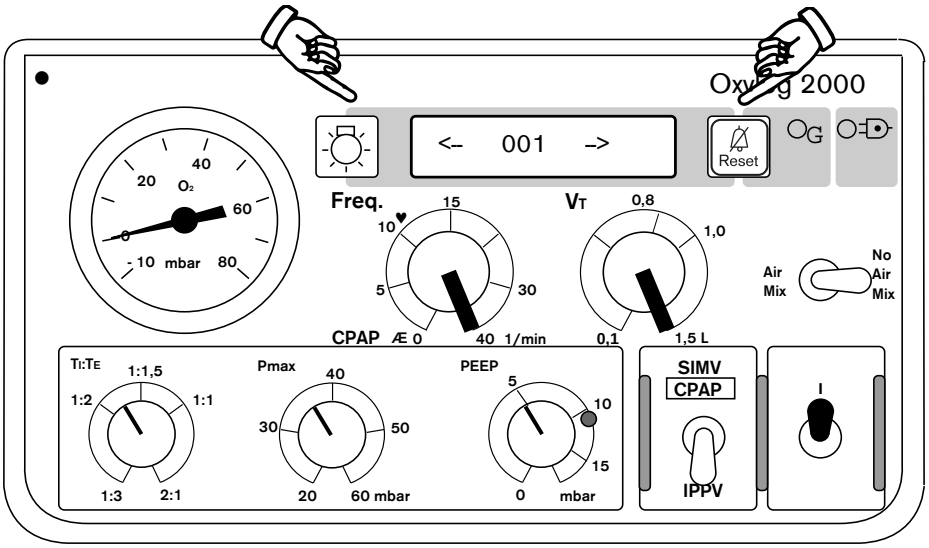
n = 2 or 3

Customer Service Mode (CSM)

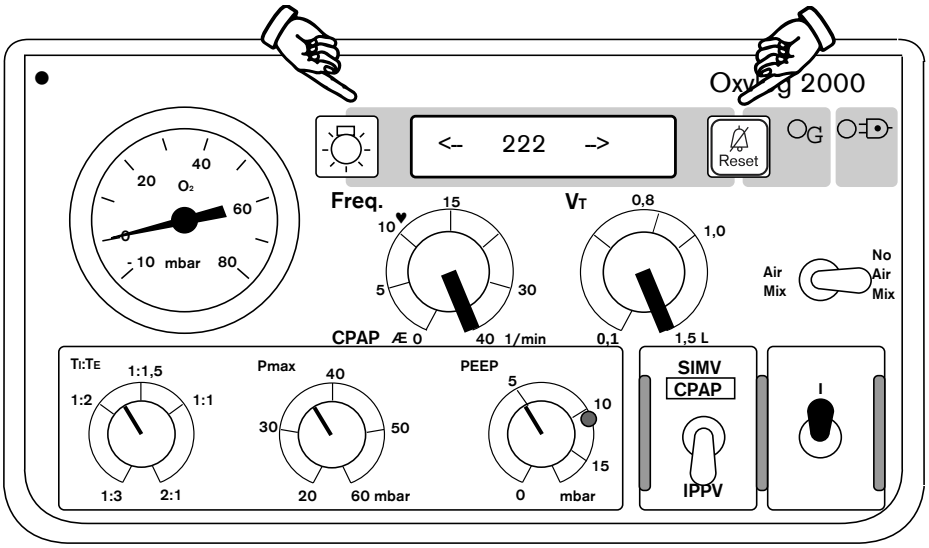
Release the **info button** and **reset button**

Adjust language <– 001 –>

Enter the code number “222” using the **info button** or **reset button**



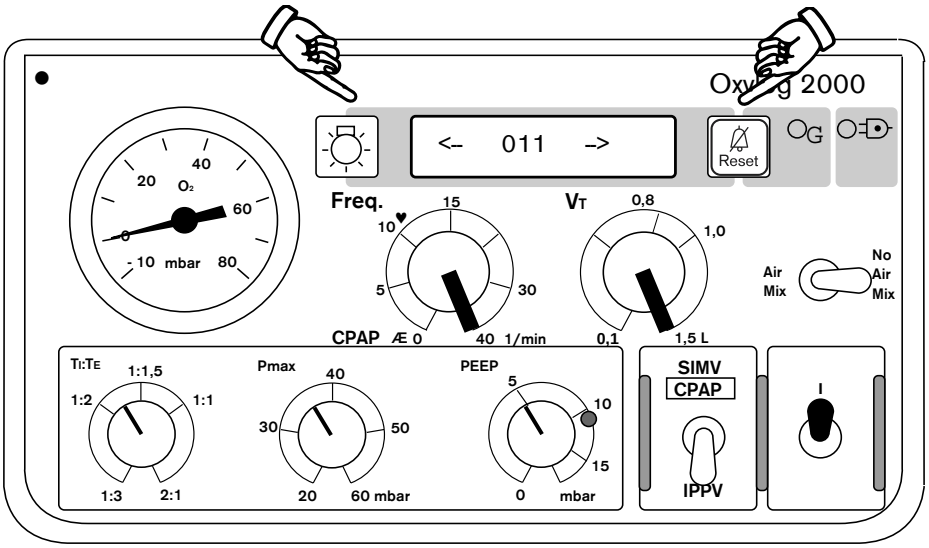
Press both **info button** and **reset button** for about 5 seconds



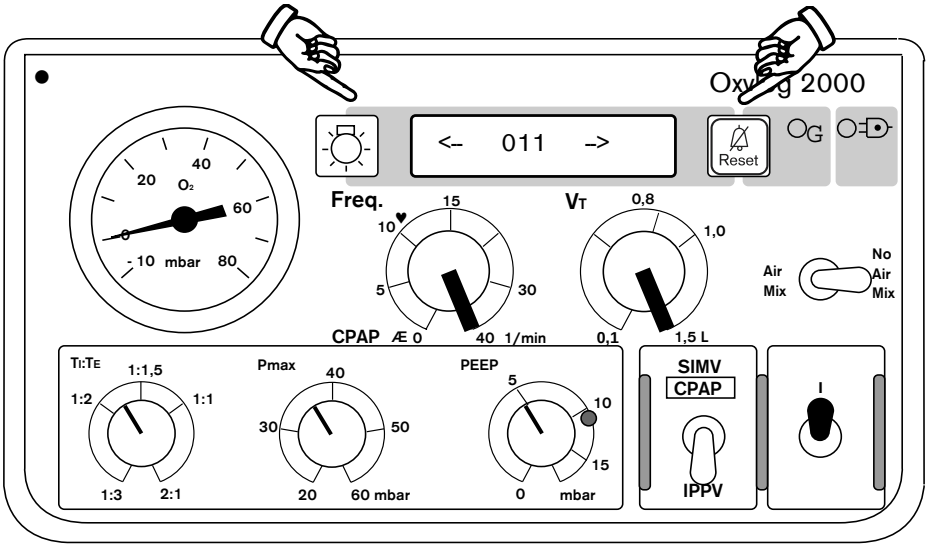
Displayed message

Extended Dräger Service Mode

Select a test step using the **info button** or the **reset button**



Press both the **info button** and **reset button** to activate the desired test.



Exiting the Extended Dräger-Service-Mode (ESM) for SW version 2.XX and higher

Switch Oxylog 2000 off and on again.